

## **2008 Water Quality Report**

Department of Water Supply

County of Maui

200 South High Street

Wailuku, Maui, HI 96793

[www.mauiwater.org](http://www.mauiwater.org)

June 30, 2009

Dear Customers:

I am proud to present to you the 11th annual Water Quality Report for the Department of Water Supply (DWS). Here at the DWS we are committed to providing the people of Maui County with clean and safe water, while at the same time preserving this precious resource for future generations.



The Water Quality Report is a review of the data we compiled in 2008 for more than 300 potential contaminants. Included are details of your water source, what's in your water, and how it compares to EPA and Hawaii state health standards. Also listed are phone numbers and resources for you to learn more about your water.

In the past year, the DWS took over 16,785 chemical and bacteriological tests to insure the safety of your water. You can be assured that your water meets or exceeds all federal and state standards.

The mission of the DWS is to "Provide Clean Water Efficiently." This report reflects the dedication of our 184 employees to provide you with clean water efficiently. If you have questions for our water quality laboratory, please call (808) 270-7550. For all other inquiries, please call (808) 270-8046.

Thank you for taking the time to learn the facts about your water and for your continued support of the Department of Water Supply.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey K. Eng". The signature is fluid and cursive.

Jeffrey K. Eng  
Director of Water Supply



## **WHAT IS THIS REPORT ABOUT?**

The Water Quality Report is sent to all customers every summer. The federal Safe Drinking Water Act (SDWA) requires that public water systems provide customers with a water quality report that summarizes water quality information for the previous calendar year. We are committed to providing our customers with this information because informed customers are our best allies.

## **IS MY DRINKING WATER SAFE?**

Yes. The Department of Water Supply makes the quality of your drinking water its number one priority. To maintain our commitment to you, we routinely collect and test water samples every step of the way - from the source waters right to your home - checking purity and identifying potential problems. We monitor your drinking water according to EPA regulations to ensure that it meets all state and federal standards.

Our goal, is and always, has been to provide you with a safe and dependable supply of drinking water.

## **SOURCE WATER ASSESSMENT**

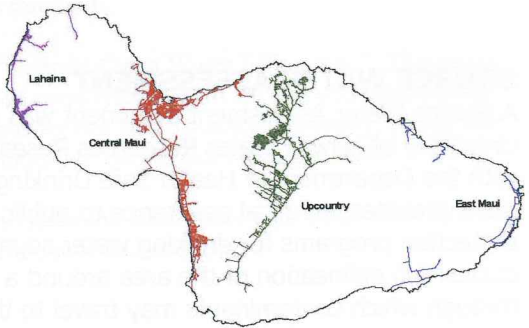
A Source Water Assessment document was completed in 2004 by the University of Hawaii Water Resources Research Center in conjunction with the Department of Health Safe Drinking Water Branch. The assessment provides technical assistance to public water systems to develop protection programs for drinking water sources. The documents includes: (1) delineation of the area around a drinking water source through which contaminants may travel to the drinking water supply, (2) inventory of activities that may lead to the release of contaminants within the delineated area, and (3) determination of the susceptibility of the water source experiencing a future contamination. The Department of Water Supply is working with advisory committees to develop a well-head protection program for our drinking water wells. Should you wish to review the source water assessment document, or learn about the well-head protection program, please contact the Water Resources and Planning Division at 244-8550.

## **FLUSHING PROGRAM IN THE UPCOUNTRY AREA TO IMPROVE WATER QUALITY**

The DWS is flushing waterlines in the Upcountry area to improve water quality in its dead-end distribution lines. The purpose of this program is to comply with the Lead and Copper rule of the federal Safe Drinking Water Act. Flushing a waterline involves turning on the water at a fire hydrant or standpipe at full force to rid the pipeline of any buildup in the pipe. This process can take up to 20 minutes at any one point. Staff also take samples of the water before and after the flushing to ensure that water delivered to consumers meets the requirements of the Safe Drinking Water Act. Consumers should contact the Field Operations office at 270-7633 if water at their tap is discolored.

### **Where Does My Water Come From?**

Depending on where you live on Maui or Molokai, you receive either ground water or surface water. Ground water starts as rain falling over the mountains. The water is filtered naturally as it seeps through the porous volcanic rock to reach large underground formations called aquifers. Pumps are used to get this water from the aquifers to you. Surface water accumulates mainly as a result of direct runoff from rain into streams and rivers.



On Maui there are five water districts:

Central : A blend of surface water treated at the Iao Treatment Plant and ground water serves Kahului, Kihei, Makena, Paia, Waihee, Wailea and Wailuku.

East Maui : Keanae, Nahiku, Hana: have ground water in all districts

Lahaina : A blend of ground and surface water treated at the Lahaina and Mahinahina Treatment Plants serves all of Lahaina and Napili

Molokai : Ground water in all districts.

### Upcountry :

Lower Kula: Surface water treated at the Lower Kula Treatment Plant serves areas from Piiholo to Omaopio

Makawao: A blend of surface treated at Kamole Treatment Plant and ground water serves Hali'imaile, Haiku, Makawao and Pukalani

Upper Kula: Surface water treated at the Upper Kula Treatment Plant serves Olinda to Kanaio

## **SPECIAL NOTICE TO USERS OF KIDNEY DIALYSIS MACHINES AND FISH OWNERS**

Maui DWS water in the Upper Kula area is treated with chloramines, a disinfectant that produces fewer disinfection by-products such as trihalomethanes. As such, customers who have unique water quality needs including those who use specialized treatments such as kidney dialysis machines or fish owners should make the necessary adjustments to remove chloramines. Go to our website for more information at :

[www.mauewater.org](http://www.mauewater.org), click on Maui Water

## **Why Is There Anything In My Water?**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs and wells.

As water travels over the surface of the land or through the ground it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source waters before we treat it include:





Microbial Contaminants - such as virus, protozoa and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants - such as salts and metals, which may be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides— may come from a variety of sources such as agriculture and residential uses.

Radioactive Contaminants—are naturally occurring.

Organic Chemical Contaminants—including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff, and septic systems.

For more information about contaminants and potential health effects call the EPA Safe Drinking Water hotline @ 1-800-426-4791.

In April 2004, the DWS stopped using phosphates for lead control in the Upcountry water system. We now use soda ash (sodium carbonate), lime and caustic soda for pH adjustment to minimize lead leaching from customers' plumbing. We also flush the Upcountry water system on a regular basis. Lead can have devastating effects on children's health. If you think your child may be exposed to lead, please contact your primary care physician.

### **Lead and Copper in your drinking water. Are you at risk?**

Lead is not detectable in the Maui DWS systems. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Maui DWS is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing

your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at

<http://www.epa.gov.safewater.lead>.

## Customers can maintain water quality in various ways.

1. **Backflow protection** - a simple, but important component in plumbing that safeguards the drinking water supply. Higher water pressures elsewhere can cause a reversal in the normal flow of water. This may allow contaminated water to enter the water distribution system. Backflow prevention devices allow the water to flow in only one direction. The air gap between a faucet and water in the sink is the most common form of backflow prevention. Never leave a running hose in a bucket of water. The contents of the bucket could be "sucked back" into your home plumbing and potentially contaminate the water. Businesses in Maui County that are required to have backflow prevention devices should check them annually to ensure that they are working properly.
2. **Proper use of pesticides/herbicides** - avoid pesticide/herbicide application when rain is expected. This will prevent pesticide herbicide runoff that may contaminate our groundwater.
3. **Proper disposal of hazardous materials** - hazardous materials such as paint, solvents, used oil and other household cleaning supplies must not be dumped on the ground. Call the Recycle Maui County Hotline at 270-7880 to find out where you can properly dispose these materials to avoid groundwater contamination.



We are required by Federal and State laws to test your drinking water for different contaminants. The following is a list of what your water was tested for in 2008:

## Regulated Contaminants



## Organic Contaminants

2,4-D  
2,4,5-TP(Silvex)  
Acrylamide  
Alachlor  
Aroclor 1016,1221,1232,1242  
Aroclor 1248,1254,1260  
Atrazine  
Benzo(a)pyrene(PAHs)  
Carbofuran  
Chlordane  
Di(2-ethylhexyl)adipate  
Di(2-ethylhexyl)phthalate  
Dibromochloropropane  
Dinoseb  
Dioxin  
Diquat  
Endothall  
Endrin  
Epichlorohydrin  
Ethylene dibromide(EDB)  
Glyphosate  
Heptachlor  
Heptachlor epoxide  
Hexachlorobenzene  
Hexachloropentadiene  
Lindane  
Methoxychlor  
Oxamyl(Vydate)  
PCBs(Polychlorinated biphenyls)  
Pentachlorophenol  
Pichloram  
Simazine  
Toxaphene

## Microbiological Contaminants

Total coliform  
Fecal coliform  
E. coli  
Giardia  
Cryptosporidium

## Turbidity

## Inorganic Contaminants

Antimony  
Arsenic  
Asbestos(> 10um)  
Atrazine  
Barium  
Beryllium  
Cadmium  
Chromium(total)  
Copper  
Cyanide(as free cyanide)  
Fluoride  
Lead  
Mercury(total)  
Nitrate(as N)  
Nitrite(as N)  
Selenium  
Thallium



## **Volatile Organic Contaminants**

Benzene  
Carbon tetrachloride(CTC)  
Chlorobenzene  
o-Dichlorobenzene  
p-Dichlorobenzene  
1,2-Dichloroethane(EDC)  
1,1-Dichloroethylene  
cis-1,2-Dichloroethylene  
trans-1,2-Dichloroethylene  
Dichloromethane  
1,2-Dichloropropane(DCP)  
Ethylbenzene  
Haloacetic Acids(HAA5)  
Styrene  
Tetrachloroethylene(PCE)  
1,2,4-Trichlorobenzene  
1,1,1-Trichloroethane(TCA)  
1,1,2-Trichloroethane  
Trichloroethylene(TCE)  
1,2,3-Trichloropropane(TCP)  
Total Trihalomethanes(TTHMs)  
Toluene  
Vinyl chloride  
Xylenes(total)

## **Radioactive Contaminants**

Alpha emitters  
Beta particles/photon emitters  
Radium 226+228

## **Unregulated Contaminants**

### **Unregulated Contaminants**

2,4-DB  
Aldicarb  
Aldicarb sulfone  
Aldicarb sulfoxide  
Aldrin  
Butachlor  
Carbaryl  
Dicamba  
Dieldrin  
3-Hydroxycarbofuran  
Methiocarb  
Methomyl  
Metolachlor  
Metribuzin  
Molinate  
Nickel  
Paraquat  
Propachlor  
Propoxur  
Thiobencarb  
  
Acetochlor  
Aeromans  
Bromoform  
DCPA mono-acid degradate  
DCPA di-acid degradate  
4,4'-DDE  
  
2,4-dinitrotoluene  
2,6-dinitrotoluene  
EPTC  
Manganese  
Methyl t-Butyl Ether(MTBE)  
Molinate  
Nitrobenzene  
Perchlorate  
Terbacil

## **IMPORTANT HEALTH INFORMATION**

Some people may be more vulnerable to drinking water contaminants than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. For information about the Environmental Protection Agency's (EPA) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* or other microbial contaminants and potential health effects call the EPA's Safe Drinking Water Hotline (800-426-4791) .

### **Your Comments Are Welcome!**

We welcome your questions, concerns and observations. We also encourage our customers to attend and participate at our meetings regarding our water utility. The Board of Water Supply usually meets on the 4th Thursday of the month at 9:00 a.m. Please call 270-7304 for meeting locations or check out our web site for details.

## **Frequently Asked Questions (FAQ)**

### **What is the pH of my water?**

The pH of water varies by districts:

Central	7.3-7.9	Makawao	7.6-9.1	Lahaina	7.8-8.2
Lower Kula	7.9-9.0	Upper Kula	7.2-9.2	Molokai	7.2-7.3

### **Do I have hard or soft water?**

Hardness is measured in milligrams per liter (mg/L). Any hardness reading over 75 mg/L is considered hard water. Generally, surface water is soft water. Makawao, Pukalani, Lower Kula and Upper Kula have soft water between 17-69 mg/L. Ground (well) water on Maui is usually 52-171 mg/L .

### **Is there fluoride in my water?**

The Maui DWS does not add fluoride to your water. If you are concerned about your children's dental health, please talk to your pediatrician or dentist.

### **What can I do about chlorine taste and odor?**

Chlorine kills organisms that may cause disease. If you choose to remove the chlorine with a filter, refrigerate the water to limit bacterial re-growth. Other alternatives include:

filling a pitcher and letting it stand in the refrigerator overnight (this is the best way), filling a glass or jar with water and letting it stand in the sunlight for 30 minutes, or heating water to approximately 100 degrees Fahrenheit.

### **How often is my water tested? And can I get my water tested?**

Every week our water is tested by our certified microbiologists at the source and within the distribution system for any bacteriological contamination. Chemicals are analyzed on a timetable established by state/EPA requirements. You may have your own tap water tested by a private water quality testing lab for a fee. A list is available through our laboratory at 270-7550.

### **I live on a dead-end (cul-de-sac) and my water has a yellow tinge to it. Is this okay?**

You should call the DWS service line (270-7633) to have personnel flush the dead-end main. Or, if you prefer, open the faucets in your home until the water clears up; this will bring fresh water to your home and improve its water quality.

#### **How to Contact Us**

Questions on water quality: Maui DWS Laboratory: **808-270-7550**

Questions about : DWS Administration: **808-270-7816**

All other DWS inquiries: **808-270-8046**

Drinking water in Hawaii - DOH Safe Drinking Water Branch  
**1-800-468-4644 ext. 6-4258**

EPA Safe Drinking Water Hotline: **1-800-426-4791**

We're also on the web: **[www.mauiwater.org](http://www.mauiwater.org)**

Other websites:

Department of Health - Safe Drinking Water Branch:

[www.hawaii.gov/health/eh/sdwb](http://www.hawaii.gov/health/eh/sdwb)

EPA (Environmental Protection Agency):

[www.epa.gov/safewater](http://www.epa.gov/safewater)





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